Total severity is a ready index of the relative importance of specific causes of injury, and the severity rate, obtained by comparing total severity with number of employees, is the best possible index of the accident hazard of specific industries.

The format of this document is good, the table headings are clear, and the several charts and graphs are really useful. No time or space has been wasted upon irrelevant matter, nor upon beautiful but meaningless designs. The only criticism to be offered is that much highly useful material was omitted. Considerations of expense, enforced by inadequate appropriations, doubtless caused the omissions, yet the added cost would amount at most to a few thousand dollars per annum.

The most serious omission is the failure to give exposures in correlation with the number and severity of injuries. The Industrial Commission has jurisdiction over both insured and uninsured employers and is in position to obtain at least the pay-roll of every employer subject to compensation. Employers who are permitted to carry their own risk can be required to report pay-rolls in such detail as the commission may prescribe, and insurance carriers can be compelled to report pay-rolls by individual risks in Wisconsin as well as in Pennsylvania. The pay-roll is not the best basis for computing accident severity rates, but it is the only basis attainable in any jurisdiction, American or foreign. Total pay-roll, divided by the average weekly wage obtained from accident statistics, will even give a closer approximation to the actual number of employees exposed than can ever be obtained from the employers' reports of the numbers employed.

The industry groups in this document are too few and too comprehensive—logging, saw milling and furniture manufacturing, *e. g.*, are by no means a homogeneous aggregate. It is unfortunate too that the industry tables cover only a single year; the five year period would give a broader exposure and more representative averages. Lastly, there should be far more detail as to the *nature* in correlation with severity of injuries.

With all these sins of omission the publication under review is much the best extant compilation of accident statistics for a large industrial community. *General Accident Statistics* reflects great credit upon the Industrial Commission and its statistician.

E. H. Downey

Pennsylvania State Workmen's Compensation Commission

Family Budgets of American Wage-Earners: A Critical Analysis. Research Report No. 41, September, 1921. National Industrial Conference Board. New York: The Century Company. 97 pp.

This report presents a brief summary of facts about nearly all the important budget studies of wage-earners' families in America. Readers are already familiar with summaries of budgets published by the Bureau of Applied Economics. This study is somewhat more analytically critical, however, and less a detailed presentation by items of the different budget studies. The facts reviewed are incomes, expenditures, percentages spent for food, clothing, rent, fuel and light,

and sundries; sizes of families, income classes, dates, places, investigators, etc., for the various investigations of the last quarter of a century. In addition there is a short history of the use of family budgets in wage disputes. Woven around the facts and their classification are interpretive estimates of their value and use.

In popular usage there is much confusion about the cost of living. The report calls attention to the difference between the change in the cost of living and what the cost of living is. It also differentiates the minimum subsistence level from the minimum comfort level, a differentiation frequently not made in wage adjustments. The report also attempts to show the difference between budget studies which are simply records of actual expenditures and budget studies that are estimates of standards of what ought to be spent. These two types of budgets are quite different things, serving different purposes, although they are interrelated and a good estimate of a standard can be made only after a study of actual expenditures. Obviously, the two types of budgets may be made at either the minimum subsistence level or the minimum comfort level.

It seems to me that this last differentiation is not always kept clearly in mind by the author, and that this is one reason for the harsher criticism of the minimum comfort budgets. The author recognizes in the conclusion of Chapter II that estimates of standards at the subsistence level are based on actual records, but seems not to recognize this basis as true at the comfort level discussed in Chapter III. "In the present chapter are reviewed the best known of the attempts to estimate the cost of living made without collecting incomes and expenditures from actual families." (Page 33.) Seldom before has there been so much good material on "incomes and expenditures from actual families" as was collected by the United States Bureau of Labor Statistics. Most of the data were for the minimum comfort level and served as a basis for estimates of standards made at this level. Also, many estimates reviewed in Chapter III were based on actual records of expenditure. Again, in estimating the minimum comfort budgets: "The minimum comfort budgets on the other hand represent ideal conditions. . . ." (Page 50.) The minimum comfort budgets are simply standard estimates at a higher level than the standard estimates at the subsistence level, and would not be admitted by the investigators who made them or by the wage-earners as representing ideal conditions.

In Chapter IV the author presents research to show that the size of the family used in estimates of standard budgets—five persons—is not typical of the country or locality. This research on the actual size of the family is interesting but, it is thought, not particularly relevant to setting a standard. The average size of the family in a particular locality may be less than five, but a standard would hardly be drawn up for less than five. Public policy would not sanction a smaller family, for two children must grow up to replace the parents, else the population decreases; and since the chances of death for children are great, provision must be made for more than two children. Mr. Rowntree's researches on this point show a practical justification for this procedure. The following quotation seems to be another indication of a possible confusion of the actual and the standard. "Instead a family of five . . . was taken as typical of the American wage-earner." (Page 71.) I doubt if the author could cite but few if any instances where the

framers of standard budgets claimed that the family of five was taken as "typical." It is taken as a minimum standard but not as actual or typical.

Frequently the point is made in the report that families studied in surveys were selected and not chosen at random. The idea that selection prevents representativeness and that purely random selection is a desideratum needs qualification. A mere haphazard choice of families would itself turn out to be a selection; in reality the samples must be selected in order to yield the desired representativeness. And if the purpose of a survey is to determine a standard, cases are selected to throw light on the standard. If a standard is being set up for families without boarders, why collect data on boarders?

The report is scholarly. There are abundant footnotes. The facts and data are accurately listed. There is evidence of carefulness. Any departure from science, rather, any bias in the report, would show only in the interpretations and in the selection of material to be presented. For instance, this report of the National Industrial Conference Board nowhere presents a budget in detail showing how many shoes or dresses or hats are bought, or how much is spent for recreation or for doctors. The method here is to present only such summaries as "40 per cent of the income is spent for food." This procedure is, of course, quite within the right of the authors, and to have done otherwise might have marred the nature of the study or not fitted in with its scope. This method of presentation leaves the reader less impressed with the human significance of the standard of living than if, for instance, the report read,"the budget allowed the purchase of one straw hat every other year at $2." In the analysis and collection of budgets by organizations supported by wage-earners, budgets are given by items because these organizations wish to get across the human meaning of the budget. Different methods of presentation leave various effects as truly as do data and facts. For instance, what the National Industrial Conference Board calls the "American minimum," the wage-earner will call "bare subsistence." In any statistical work there is always room for the subjective; as a matter of fact, it is very difficult to make any interpretation free from bias. This report, as reports go on controversial and emotional issues, is exceptionally free from subjective distortion, and would be quite generally rated as a clear, useful presentation.

WILLIAM F. OGBURN

Farming Costs, by C. S. Orwin. Oxford University Press. 1921. 141 pp.

This little book, a revision of an earlier work entitled *The Determination of Farming Costs*, consists essentially of an outline of a method by which cost accounting can be applied to agricultural operations, a brief but penetrating discussion of the fundamental problems that arise in this field of cost analysis, and a statement of the principal results to be obtained from such accounting. It appears to be based largely upon investigations conducted by the Institute for Research in Agricultural Economics, of which Mr. Orwin is director.

In the introductory chapter attention is called to the more patent advantages of stock-keeping and costing in the conduct of a manufacturing establishment, and it is pointed out that as yet little effort has been made to place farm manage-